

REMARKS:In the Specification

The Abstract has been amended in a manner believed to obviate the objection. Particularly, the Abstract has been rewritten to mimic claims 1 and 2 as originally filed. No new matter has been added.

The patent number of the parent of the present application has been added to the paragraph at p. 1, line 9.

One of the duplicate periods has been removed from the paragraph found at p. 4, line 32 to p. 5, line 13.

Claim 1

Claim 1 has been rejected under 35 USC 102(b) as being anticipated by "Oxygen as a surfactant in the growth of giant magnetoresistance spin valves" by Egelhoff, Jr. et al. (Egelhoff).

Claim 1 has been amended to require that at least the first surface (on the first ferromagnetic layer) is exposed to oxygen. In contrast, Egelhoff discloses only application of oxygen to the upper surface spacer layer, or a complete build in an oxygen environment maintained at 5×10^{-9} Torr O₂. Therefore, a patentable distinction exists. Reconsideration and allowance is respectfully requested.

Claims 6 and 7 depend from claim 1, and so are also believed to be allowable over the art of record.

Further, Applicant argues that Egelhoff is inoperable. As noted in MPEP Section 2121:

When the reference relied on expressly anticipates or makes obvious all of the elements of the claimed invention, the reference is presumed to be operable. Once such a reference is found, the burden is on applicant to

provide facts rebutting the presumption of operability. *In re Sasse*, 629 F.2d 675, 207 USPQ 107 (CCPA 1980).

The present application contains description rebutting the operability of Egelhoff. As noted at p. 3, lines 11-14 of the present application, discussing Egelhoff:

Furthermore, the use of oxygen for all spin valve layer depositions may result in oxidation of Mn in anti-ferromagnetic materials, such as FeMn, PtMn, IrMn, PdPtMn and NiMn, and thus kills the spin valve effect. Therefore this technique can not be applied for spin valve deposition.

In addition, adsorbing oxygen only on the copper surface does not improve the GMR, and produces only a positive coupling field. Furthermore, this technique results in a decrease in sheet resistance, which reduces the overall signal. Finally, prior art oxygen treatment does not show stabilization of the ferromagnetic coupling field upon hard bake annealing cycles.

[Because the evidence refuting Egelhoff is already of record by virtue of its inclusion in the present application, no Declaration or Affidavit is enclosed.]

Thus, the processes disclosed in Egelhoff are nonoperative. Accordingly, Egelhoff cannot anticipate claims 1, 6 and 7. Reconsideration and allowance of claims 1, 6 and 7 is respectfully requested.

Claims 8-12

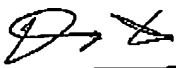
New claims 8-12 have been added to further define and vary the scope of the present invention. No new matter has been added.

In the event a telephone conversation would expedite the prosecution of this application, the Examiner may reach the undersigned at (408) 971-2573. For payment of any additional fees due in connection with the filing of this paper, the Commissioner is authorized to charge such fees to Deposit Account No. 09-0466 (Order No. SJO920000063US2).

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Respectfully submitted,

By: 
Dominic M. Kotab
Reg. No. 42,762

Date: 11/23/05

Zilka-Kotab, PC
P.O. Box 721120
San Jose, California 95172-1120
Telephone: (408) 971-2573
Facsimile: (408) 971-4660